

What is claimed is:

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1. A gas transfer machine comprising:

a pump rotor mounted on a rotatable shaft for  
5 transferring a gas; and

a reluctance-type motor for rotating said  
rotatable shaft about its own axis, said reluctance-type  
motor comprising a stator, a motor rotor surrounded by said  
stator, and a shield member isolating said stator from said  
10 motor rotor, said motor rotor being directly coupled to said  
rotatable shaft and having a plurality of magnetic salient  
poles.

2. A gas transfer machine according to claim 1,  
15 wherein said shield member comprises a molded body of  
synthetic resin having a surface positioned radially  
inwardly of an inner circumferential surface of said stator,  
said stator being embedded in said molded body of synthetic  
resin.

20 3. A gas transfer machine according to claim 1,  
wherein said shield member comprises a can of synthetic  
resin or nonconductive material.

25 4. A gas transfer machine according to claim 1,  
wherein said motor rotor has a plurality of permanent  
magnets disposed respectively in said magnetic salient  
poles.

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5. A gas transfer machine according to claim 1,  
wherein said motor rotor is made of permalloy.

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A2

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B2

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